

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Pre Application

Inventor(s): Taylor et al.
Appln. No.: 10/798,227
Confirm. No.: 3455
Filed: March 11, 2004
Title: ROBOT VACUUM WITH FLOOR TYPE MODES

PATENT APPLICATION

Art Unit:
Examiner:

Customer No. 23910

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8

I hereby certify that this correspondence is being deposited in the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on August 16, 2004.

(Signature)

Teri Muir

Signature Date: August 16, 2004

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.56

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

It is requested that the information identified in this statement be considered by the Examiner and made of record in the above-identified application. This statement is not intended to represent that a search has been made or that the information cited in the statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56. If this is a continuation, divisional or continuation-in-part application, it is understood that the Examiner will consider all information which was considered by the Office in a parent application. MPEP §609. Such information therefore is not listed herein unless it is desired that the information be printed on a patent issuing from the subject application.

Enclosed with this statement are the following:

- ☒ Form PTO-1449. The Examiner is requested to initial the form and return it to the undersigned in accordance with M.P.E.P. §609.
- ☒ The present application is being/was filed after June 30, 2003. In accordance with the pre-official gazette waiver of 37 CFR 1.98 (a)(2)(i) posted at: pac/dapp/opla/preognotice/idswouscopies.htm, copies of cited U.S. patents and publications are not enclosed. However, copies of cited foreign patent documents and non-patent literature are enclosed in accordance with 37 CFR 1.98(a)(2), as still required, except for those items designated by an asterisk (*), which were previously submitted by the applicant in a parent application, from which benefit under 35 U.S.C. §120 is claimed, with an *Information Disclosure Statement* submitted in the parent application which complies with the

September 8, 2000 or subsequent revision of 37 C.F.R. §1.98(a-c), as allowed under 37 C.F.R. §1.98(d)(1).

— The present application was filed prior to June 30, 2003. A copy of each cited document as required by 37 C.F.R. §1.98 is enclosed, except for those items designated by an asterisk (*), which were previously submitted by the applicant in a parent application, from which benefit under 35 U.S.C. §120 is claimed, with an *Information Disclosure Statement* submitted in the parent application which complies with the September 8, 2000 or subsequent revision of 37 C.F.R. §1.98(a-c), as allowed under 37 C.F.R. §1.98(d)(1).

— If any of the cited/submitted documents is in a foreign language, a concise explanation of relevance is provided pursuant to 37 C.F.R. §1.98(a)(3)(i). For foreign language documents cited in a search report by a foreign patent office, the requirement for a concise explanation of relevance is satisfied by the submission herewith of an English language version of the search report. MPEP §609A(3). If a written English-language translation of a non-English language document, or portion thereof, is within the possession, custody or control of, or is readily available to any individual designated in §1.56(c), a copy of the translation accompanies this statement, 37 C.F.R. §1.98(a)(3)(ii), and satisfies the requirement for a concise explanation of relevance, MPEP §609A(3).

— ***PTA Statement under 37 C.F.R. §1.704(d).*** Each item of information contained in the *Information Disclosure Statement* was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in §1.56(c) more than thirty days prior to the filing of the *Information Disclosure Statement*.

This statement should be considered because:

√ 37 C.F.R. §1.97(b). This statement qualifies under 37 C.F.R. §1.97, subsection (b) because:

- (1) It is being filed within three months of the filing date of an application other than a continued prosecution application under § 1.53(d);
-- OR --
- (2) It is being filed within 3 months of entry of a national stage;
-- OR --
- (3) It is being filed before the mailing date of the first Office Action on the merits,
-- OR --
- (4) It is being filed before the mailing date of the first Office Action after the filing of a Request for Continued Examination under 37 C.F.R. §1.114.

— 37 C.F.R. §1.97(c). Although it may not qualify under subsection (b), this statement qualifies under 37 C.F.R. §1.97, subsection (c) because:

- (1) It is being filed before the mailing date of a FINAL Office Action, a Notice of Allowance, or an action that otherwise closes prosecution in the subject application, whichever occurs first.

-- AND (check at least one of the following) --

- (1) It is accompanied by a STATEMENT as set forth in 37 C.F.R. §1.97(e).
-- OR --
— (2) It is accompanied by the \$180 fee set forth in 37 C.F.R. §1.17(p).

— **37 C.F.R. §1.97(d).** Although it may not qualify under subsection (b) or (c), this statement qualifies under 37 C.F.R. §1.97, subsection (d) because:

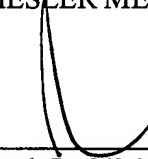
- (1) It is being filed on or before payment of the Issue Fee;
-- AND --
(2) It is accompanied by a STATEMENT as set forth in 37 C.F.R. §1.97(e);
-- AND --
(3) It is accompanied by the \$180 fee set forth in 37 C.F.R. §1.17(p).

✓ **Fee Authorization.** The Commissioner is hereby authorized to charge any deficiencies or credit any overpayment to Deposit Account No. 06-1325. A duplicate copy of this authorization is enclosed.

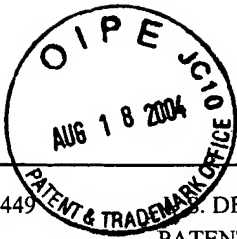
Respectfully submitted,

FLIESLER MEYER LLP

Date: 8-16-04

By: 
Joseph P. O'Malley
Reg. No. 36,226

FLIESLER MEYER LLP
Four Embarcadero Center, Fourth Floor
San Francisco, California 94111-4156
Telephone (415) 362-3800



| | | | |
|--|--|---|----------------------|
| Form PTO-1449 (Substitute) Information Disclosure Statement BY APPLICANT (Use several sheets if necessary) | U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE | Attorney Docket Number SHPR-01360US | Serial/Patent Number |
| | Applicant/Patent Owner | | |
| | Filing/Issue Date | Group Art Unit | |

U.S. PATENTS

| Examiner Initial | Patent Number | Issue Date | First Named Inventor | Class | Subclass | Filing Date |
|---------------------|---------------|------------|----------------------|-------|----------|----------------|
| | D 471,243 | 03/04/03 | Cioffi et al. | | | |
| | 4,674,048 | 06/16/87 | Okumura | | | |
| | 4,700,427 | 10/20/87 | Knepper | | | |
| | 4,706,327 | 11/17/87 | Getz et al. | | | |
| | 4,782,550 | 11/08/88 | Jacobs | | | |
| | 4,962,453 | 10/09/90 | Pong et al. | | | |
| | 4,977,639 | 12/18/90 | Takahashi et al. | | | |
| | 5,012,886 | 05/07/91 | Jonas et al. | | | |
| | 5,023,444 | 06/11/91 | Ohman | | | |
| | 5,095,577 | 03/17/92 | Jonas et al. | | | |
| | 5,109,566 | 05/05/92 | Kobayashi et al. | | | |
| | 5,111,401 | 05/05/92 | Everett Jr. et al. | | | |
| | 5,148,573 | 09/22/92 | Killian et al. | | | |
| | 5,208,521 | 05/04/93 | Aoyama | | | |
| | 5,220,263 | 06/15/93 | Onishi et al. | | | |
| | 5,276,618 | 01/04/94 | Everett Jr. | | | |
| | 5,279,972 | 01/18/94 | Heckenberg et al. | | | |
| | 5,284,522 | 02/08/94 | Kobayashi et al. | | | |
| | 5,293,955 | 03/15/94 | Lee | | | |
| | 5,307,273 | 04/26/94 | Oh et al. | | | |
| | 5,309,592 | 05/10/94 | Hiratsuka | | | |
| | 5,321,614 | 06/14/94 | Ashworth | | | |

U.S. PATENTS

| Examiner Initial | Patent Number | Issue Date | First Named Inventor | Class | Subclass | Filing Date |
|------------------|---------------|------------|----------------------|-------|----------|-------------|
| | 5,341,540 | 08/30/94 | Soupert et al. | | | |
| | 5,402,051 | 05/28/95 | Fujiwara et al. | | | |
| | 5,440,216 | 08/08/95 | Kim | | | |
| | 5,446,356 | 08/29/95 | Kim | | | |
| | 5,498,940 | 03/12/96 | Kim et al. | | | |
| | 5,534,762 | 07/09/96 | Kim | | | |
| | 5,554,917 | 09/10/96 | Kurz et al. | | | |
| | 5,568,589 | 10/22/96 | Hwang | | | |
| | 5,613,261 | 03/25/97 | Kawakami et al. | | | |
| | 5,621,291 | 04/15/97 | Lee | | | |
| | 5,622,236 | 04/22/97 | Azumi et al. | | | |
| | 5,634,237 | 06/03/97 | Paranjpe | | | |
| | 5,664,285 | 09/09/97 | Melito et al. | | | |
| | 5,677,836 | 10/14/97 | Bauer | | | |
| | 5,682,640 | 11/04/97 | Han | | | |
| | 5,720,077 | 02/24/98 | Nakamura et al. | | | |
| | 5,787,545 | 08/04/98 | Colens | | | |
| | 5,815,880 | 10/06/98 | Nakanishi | | | |
| | 5,841,259 | 11/24/98 | Kim et al. | | | |
| | 5,894,621 | 04/20/99 | Kubo | | | |
| | 5,940,927 | 08/24/99 | Haegermarck et al. | | | |
| | 5,940,930 | 08/24/99 | Oh et al. | | | |
| | 5,942,869 | 08/24/99 | Katou et al. | | | |
| | 5,995,883 | 11/30/99 | Nishikado | | | |
| | 5,995,884 | 00/30/99 | Allen et al. | | | |
| | 6,042,656 | 03/28/00 | Knutson | | | |
| | 6,076,025 | 06/13/00 | Ueno et al. | | | |

U.S. PATENTS

| Examiner Initial | | Patent Number | Issue Date | First Named Inventor | Class | Subclass | Filing Date |
|------------------|--|---------------|------------|----------------------|-------|----------|-------------|
| | | 6,076,226 | 06/20/00 | Reed | | | |
| | | 6,119,057 | 09/12/00 | Kawagoe | | | |
| | | 6,255,793 | 07/03/01 | Peless et al. | | | |
| | | 6,263,989 | 07/24/01 | Won | | | |
| | | 6,323,932 | 11/27/01 | Zhang et al. | | | |
| | | 6,327,741 | 12/11/01 | Reed | | | |
| | | 6,338,013 | 01/08/02 | Ruffner | | | |
| | | 6,339,735 | 01/15/02 | Peless et al. | | | |
| | | 6,370,453 | 04/09/02 | Sommer | | | |
| | | 6,389,329 | 05/14/02 | Colens | | | |
| | | 6,417,641 | 07/19/02 | Peless et al. | | | |
| | | 6,431,296 | 08/13/02 | Won | | | |
| | | 6,457,206 | 10/01/02 | Judson | | | |
| | | 6,459,955 | 10/01/02 | Bartsch et al. | | | |
| | | 6,493,612 | 12/10/02 | Bisset et al. | | | |
| | | 6,493,613 | 12/10/02 | Peless et al. | | | |
| | | 6,508,867 | 01/21/03 | Schoenewald et al. | | | |
| | | 6,519,804 | 02/18/03 | Vujik | | | |
| | | 6,532,404 | 03/11/03 | Colens | | | |
| | | 6,535,793 | 03/18/03 | Allard | | | |
| | | 6,553,612 | 04/29/03 | Dyson et al. | | | |
| | | 6,574,536 | 06/03/03 | Kawagoe et al. | | | |
| | | 6,586,908 | 07/01/03 | Petersson et al. | | | |
| | | 6,590,222 | 07/08/03 | Bisset et al. | | | |
| | | 6,594,844 | 07/22/03 | Jones | | | |
| | | 6,597,143 | 07/22/03 | Song et al. | | | |
| | | 6,601,265 | 08/05/03 | Burlington | | | |

U.S. PATENTS

| Examiner Initial | | Patent Number | Issue Date | First Named Inventor | Class | Subclass | Filing Date |
|------------------|--|---------------|------------|----------------------|-------|----------|-------------|
| | | 6,605,156 | 08/12/03 | Clark et al. | | | |
| | | 6,611,120 | 08/26/03 | Song et al. | | | |
| | | 6,615,108 | 09/02/03 | Peless et al. | | | |
| | | 6,615,885 | 09/09/03 | Ohm | | | |
| | | 6,661,239 | 12/09/03 | Ozick | | | |
| | | 6,671,592 | 12/30/03 | Bisset et al. | | | |
| | | | | | | | |

U.S. PATENT PUBLICATIONS

| Examiner Initial | | Patent Application Publication Number | Publication Date | Applicant |
|------------------|--|---------------------------------------|------------------|-----------------|
| | | 2001/0022506 | 09/20/01 | Peless et al. |
| | | 2001/0047895 | 12/06/01 | DeFazio et al. |
| | | 2002/0060542 | 05/23/02 | Song et al. |
| | | 2002/0063775 | 05/30/02 | Taylor |
| | | 2002/0091466 | 07/11/02 | Song et al. |
| | | 2002/0112899 | 08/22/02 | Dijksman et al. |
| | | 2002/0120364 | 08/29/02 | Colens |
| | | 2002/0140633 | 10/03/02 | Rafii et al. |
| | | 2002/0153855 | 10/24/02 | Song et al. |
| | | 2002/0025472 | 02/06/03 | Jones et al. |
| | | 2003/0030398 | 02/13/03 | Jacobs et al. |
| | | 2003/0039171 | 02/27/03 | Chiapetta |
| | | 2003/0060928 | 03/27/03 | Abramson et al. |
| | | 2003/0076484 | 04/24/03 | Bamji et al. |
| | | 2003/0120389 | 06/26/03 | Abramson et al. |
| | | 2003/0192144 | 10/16/03 | Song et al. |
| | | 2003/0208304 | 11/06/03 | Peless et al. |

U.S. PATENT PUBLICATIONS

| | | | | | |
|----------------------------------|--|---------------------------------------|------------------|----------------------|----------------------------------|
| Examiner Initial | | Patent Application Publication Number | Publication Date | Applicant | |
| | | 2003/0229421 | 12/11/03 | Chmura et al. | |
| PENDING U.S. PATENT APPLICATIONS | | | | | |
| Examiner Initial | | Application Number | Filing Date | First Named Inventor | Petition to Expunge? Yes No |
| | | | | | |

FOREIGN PATENT DOCUMENTS

| Examiner Initial | | Document Number | Publication Date | Country | Class | Subclass | Translation Yes No |
|------------------|--|------------------|------------------|----------------|-------|----------|-------------------------|
| | | DE 100 00 407 A1 | 12/07/2001 | Germany | | | X |
| | | DE 100 42 753 C2 | 19/09/2002 | Germany | | | X |
| | | EP 1 133 537 A1 | 30/07/2003 | Europe | | | X |
| | | GB 2 344 747 A | 21/06/2000 | United Kingdom | | | X |
| | | GB 2 344 748 A | 21/06/2000 | United Kingdom | | | X |
| | | GB 2 352 486 A | 31/01/2001 | United Kingdom | | | X |
| | | GB 2 355 523 A | 05/04/2001 | United Kingdom | | | X |
| | | GB 2 369 511 A | 09/05/2002 | United Kingdom | | | X |
| | | JP 05046246 | 26/02/1993 | Japan | | | X |
| | | JP 2002 360479 | 17/12/2002 | Japan | | | X |
| | | JP 2003 299601 | 21/10/2002 | Japan | | | X |
| | | WO 00/36968 | 29/06/2000 | PCT | | | X |
| | | WO 00/36970 | 29/06/2000 | PCT | | | X |
| | | WO 00/38255 | 29/06/2000 | PCT | | | X |
| | | WO 00/73868 | 07/12/2000 | PCT | | | X |
| | | WO 01/01208 | 04/01/2001 | PCT | | | X |
| | | WO 01/28400 | 26/04/2001 | PCT | | | X |

| FOREIGN PATENT DOCUMENTS | | | | | | | | |
|---|--|---|---------------------|-----------------|-------|----------|------------------|----|
| Examiner Initial | | Document Number | Publication Date | Country | Class | Subclass | Trans- lation | |
| | | | | | | | Yes | No |
| | | WO 02/067744 | 06/09/2002 | PCT | | | X | |
| | | WO 02/075469 | 26/09/2002 | PCT | | | X | |
| | | WO 03/031285 | 17/04/2003 | PCT | | | X | |
| | | WO 03/062937 | 31/07/2003 | PCT | | | X | |
| | | WO 03/104909 | 18/12/2003 | PCT | | | X | |
| OTHER DOCUMENTS (Include author (if any), title, publisher and place of publication, date and pertinent pages) | | | | | | | | |
| | | "Roomba" Intelligent Floor Vac, Owners Manual; 2002 iRobot Corporation; Cover page and Contents; pp.1-18. | | | | | | |
| | | Russell et al., "A Modern, Agent-Oriented Approach to Introductory Artificial Intelligence", Sun Microsystems Laboratories; (3 pages) | | | | | | |
| | | Ulrich et al., "Autonomous Vacuum Cleaner"; Laboratory of Microcomputing (LAMI); Swiss Federal Institute of Technology; Abstract: pp. 1-16. | | | | | | |
| | | Choset et al., "Coverage Path Planning: The Boustrophedon Cellular Decomposition"; Dept. of Mechanical Engineering, Carnegie Mellon University; Nomadic Technologies, Inc.; Abstract; (7 pages) | | | | | | |
| | | JACO; Trash Retrieval Robot; University of Florida; Department of Electrical and Computer Engineering; EEL 5666; Intelligent Machine Design Laboratory; Aaron Grassian; April 29, 1997; (15 pages) | | | | | | |
| | | Doty et al., "Sweep Strategies for a Sensory-Driven, Behavior-Based Vacuum Cleaning Agent"; Machine Intelligence Laboratory; University of Florida, Gainesville, FL; AAAI 1993 Fall Symposium Series; Instantiating Real-World Agents; Research Triangle Park, Raleigh, NC; October 22-24, 1993; pp. 1-6. | | | | | | |
| Examiner | | | | Date Considered | | | | |
| <p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p> | | | | | | | | |
| <p>*1 = Copy not submitted because it was submitted in prior application SN <u> </u> / <u> </u>, filed <u> </u>, 20<u> </u>, relied on under 35 USC §120.</p> <p>*2 = Copy not submitted because it was submitted in prior application SN <u> </u> / <u> </u>, filed <u> </u>, 20<u> </u>, relied on under 35 USC §120.</p> | | | | | | | | |